

(12) UK Patent Application (19) GB (11) 2 194 892 (13) A

(43) Date of printing by UK Office 23 Mar 1988

(21) Application No 8722069

(22) Date of filing 27 Mar 1987

(30) Priority data

(31) 845942

(32) 31 Mar 1986

(33) US

(86) International application data

PCT/US87/00644 En 27 Mar 1987

(87) International publication data

WO87/06040 En 8 Oct 1987

(51) INT CL⁴ (as given by ISA)

A61M 16/00 G06F 15/42

(52) Domestic classification (Edition J):

A5T 102 112 ED

(56) Documents cited by ISA

US 4617924

US 4318399

US 4182366

US 4613111

US 4211221

(58) Field of search by ISA

US 364/417; 137/908; 251/30 128/204.21 204.23
204.18 205.24 205.25

(71) Applicant

Puritan-Bennett Corporation

(Incorporated in USA—Delaware)

9401 Indian Creek Parkway, Overland Park, Kansas
66225-5905, United States of America

(72) Inventors

Charles C. Cummings

Robert I. Prince

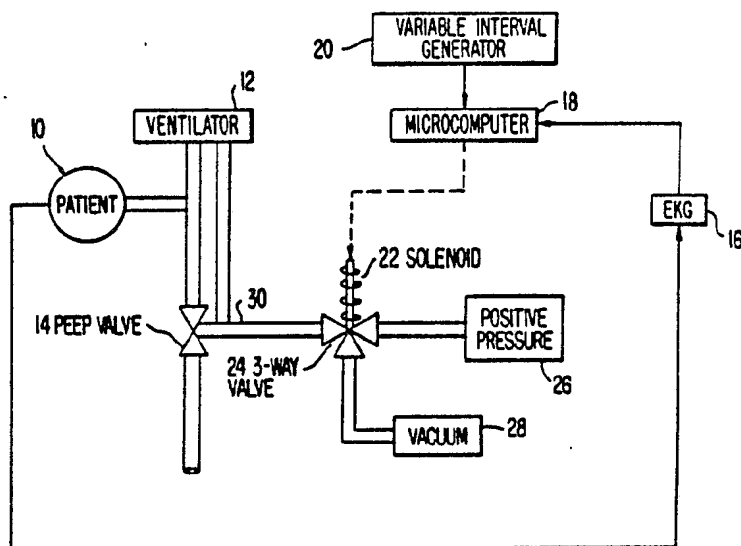
(74) Agent and/or Address for Service

Frank B. Dehn & Co,

Imperial House, 15-19 Kingsway, London WC2B 6UZ

(54) Computer gated positive expiratory pressure system

(57) The use of Positive-End-Expiratory Pressure (PEEP) systems result in decreased cardiac output and decreased regional blood flow because the heart is surrounded by higher than usual pressure (elevated intrathoracic pressure). The invention lowers intrathoracic pressure selectively during a small portion of the heart cycle when it causes its greatest detriment. The invention lowers thoracic pressure by providing a low pressure source to the PEEP valve (14). Included in the invention are a sensing means (16) for sensing sequential heart beats of a patient, together with a computing means (18), which is connected to the sensing means (16), for computing a period between the sequential heart beats. In addition, a valve means (24) is connected electrically to the computing means (18) and pneumatically to ventilator means (12) for controlling the ventilator means (12), with the valve means (24) being positioned to cease supply of positive pressure in response to the computed period.



GB 2 194 892 A